

REMARKS

Claims 1-23 are pending in the application. Claims 1-10, 12-13, and 15-20 have been withdrawn from consideration by the Examiner as being drawn to a non-elected invention. Claims 11, 14, and 21-23 have been examined. Claims 1-8, and 10 have been cancelled without prejudice to continued prosecution in one or more divisional applications. Claims 9, 12-13, drawn to compositions and dietary supplements, remain pending.

In Applicants' previous Reply to Restriction Requirement (Paper No. 5), Applicants traversed and requested reconsideration of the Examiner's restriction requirement to the extent that Groups VI (claim 12) and VII (claim 13) be rejoined with Group V (claims 11 and 14-23). Applicants provided supporting arguments that Groups VI and VII do not encompass separate and distinct inventions from Group V. Applicants also pointed out that these Groups are even classified in the same search class and subclass.

Notwithstanding Applicants' arguments, the Examiner has maintained and made final the restriction requirement in the instant action. The Examiner asserts that the restriction is proper because of the burden of what the Examiner maintains would be non-coextensive searches among the Groups. The Examiner does not address Applicants' arguments that the inventions encompassed by the Groups are not separate and distinct. Accordingly, Applicants hereby request and reserve the right to petition the Commissioner to review the restriction requirement pursuant to 37 C.F.R. §1.144, noting that a petition may be deferred until after final action on or allowance of the claims of the invention elected, but no later than appeal (see §1.181).

Claim 11 has been amended herein to specify that the recited composition is *suitable for administering to a subject*. Support for this amendment can be found in the specification, for example, at page 17, lines 18-22. No new matter has been added to the application by way of this amendment.

The foregoing claim amendments and cancellations have been made solely for the purpose of expediting prosecution of the present application and should in no way be construed as an acquiescence to any of the Examiner's rejections in this or in any former Office Action issued in the present application. Applicants reserve the right to pursue the subject matter of the present claims prior to being amended herein in this application or in another related application.

In view of the foregoing claim amendments and the arguments set forth below, Applicants respectfully submit that the claims are now in condition for allowance.

Attached hereto is a marked-up version of the changes made to the claims by the amendments requested herein entitled "VERSION WITH MARKINGS TO SHOW

CHANGES MADE". For the Examiner's convenience, the claims that will be pending upon entry of this amendment are also attached as Appendix B.

Rejection of Claim 11 Under 35 U.S.C. §102(b)

The Examiner rejects claim 11 under 35 U.S.C. §102(b) as being anticipated by Marwan *et al.* (*J. of Food Science*, 47:774-778 (1982); hereafter "Marwan"). The Examiner characterizes Marwan as teaching "phenolic compounds that can be isolated from cranberry" thereby resulting in a composition having the same characteristics as the claimed invention.

Applicants respectfully disagree. As amended, the present claims are drawn to compositions comprising a compound isolated from cranberry wherein the composition is ***suitable for administering to a subject***. This is a highly desirable feature of the claimed compositions because it makes them especially well suited for use in food or pharmaceutical applications as taught in Applicants' specification.

In contrast, Marwan merely identifies and isolates hydroxycinnamic acid derivatives in cranberry for research purposes, such as HPLC (high performance liquid chromatography) analysis and, thus, does not disclose an isolated compound which is sufficiently pure or suitable for administering to a subject. Indeed, the authors even acknowledge that "the purpose of this work is to identify the different hydroxycinnamic acid derivatives in cranberries." (page 774, col. 2, lines 8-9). The authors also acknowledge that some techniques employed even resulted in the partial destruction of the compound ("Treatment with 2N HCl at 80°C for 1 hr caused some destruction of the liberated hydroxycinnamic acid." page 775, col. 1, lines 7-8).

Accordingly, the compound taught by Marwan is clearly ***not*** suitable for administering to a subject, as claimed by Applicants. Thus, Applicants respectfully request that the rejection under 35 U.S.C. §102(b), be withdrawn.

Rejection of Claims 11 and 14 Under 35 U.S.C. §102(b)

The Examiner rejects claims 11 and 14 under 35 U.S.C. §102(b) as being anticipated by the Merck Index (Budavari *et al.*, Eds., (1989), Entry 2300, page 358). The Examiner characterizes the Merck Index as teaching that cinnamic acid is a known compound (but not that it can be isolated from a cranberry), thereby anticipating the compositions of the claimed invention.

Applicant respectfully disagrees. As stated above, the presently claimed invention is drawn to an composition ***suitable for administering to a subject*** which comprises a compound ***isolated from cranberry***. In particular embodiments, the composition can comprise a phenolic, such as cinnamic acid, which is isolated from cranberry.

In contrast, the Merck index teaches a *synthetic* cinnamic acid. Because the compound is synthetic, it is clearly not isolated from cranberry, as claimed by Applicants. Moreover, the synthetic cinnamic acid is useful for industrial purposes only, and thus, is not suitable for administering to a subject in the form of a composition, as claimed by Applicants. Indeed, at page 358, col. 1, the reference states that the main use for synthetic cinnamic acid is the manufacture of esters for the perfume industry. Moreover, it is well known in the art that compounds synthesized and prepared for industrial uses are rarely suitable for administering to a subject.

Accordingly, because the Merck Index fails to teach a composition having the features of the claimed invention, *i.e.*, a composition *suitable for administering to a subject* having an cinnamic compound *isolated from cranberry*, Applicants respectfully requests that the rejection under 35 U.S.C. §102(b), be withdrawn.

Rejection of Claims 11, 14, and 21-23 Under 35 U.S.C. §102(b)

The Examiner also rejects claims 11, 14, and 21-23 under 35 U.S.C. §102(b) as being anticipated by Camire *et al.* (*J. of Food Protection*, 43:36-37, (1980); hereafter "Camire"). The Examiner characterizes Camire as teaching adding cinnamic acid to cranberry juice, thereby anticipating the claims, in particular, "administration forms" of the claimed invention.

Applicant respectfully disagrees. As stated above, the presently claimed invention is drawn to an composition suitable for administering to a subject comprising a compound *isolated from cranberry* (*i.e.*, claim 11). In particular embodiments, the compositions can comprise a phenolic, such as cinnamic acid, which is isolated from cranberry (*i.e.*, claim 14), and be in the form of a foodstuff, dietary supplement, or pharmaceutical (*i.e.*, claims 21-23). These "administration forms" have highly desirable health benefits as taught in Applicants' specification.

In contrast, Camire teaches the addition of cinnamic acid obtained from Mallinckrodt Chemical Works (*i.e.*, cinnamic acid which is not derived from cranberry) to certain juices to retard their spoilage. Indeed, at page 36, the authors state that "it was considered that cinnamic acid might be an inexpensive, useful alternative for the control of enzymic browning...of fruit juices." The cinnamic acid used by Camire was obtained from Mallinckrodt Chemical Works and "used without further purification" and dissolved in a "small volume of alcohol to keep it in solution." Thus, the cinnamic acid used by Camire was *not* isolated from the cranberry, nor purified or prepared in such a way as to make it suitable for administering to a subject, as claimed by Applicants. Rather, cinnamic acid was added to cranberry juice under laboratory conditions to see if it would retard spoilage. Moreover, Camire reports that "[c]innamic acid

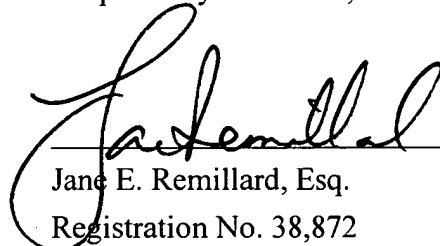
was found to have no significant effect on anthocyanin stability in cranberry juice” (emphasis added, see Abstract). Accordingly, Camire *teaches away* from the presently claimed invention by teaching that the addition of cinnamic acid to cranberry juice does not achieve any desired result.

Accordingly, because Camire fails to teach a composition having the features of the claimed invention, *i.e.*, having a compound isolated from cranberry suitable for administering to a subject, for example, in the form of a foodstuff, dietary supplement, or pharmaceutical, Applicants respectfully request that the rejection under 35 U.S.C. §102(b), be withdrawn.

CONCLUSION

In view of the foregoing, entry of the amendments and remarks herein, reconsideration and withdrawal of all rejections, and allowance of the instant application with all pending claims are respectfully solicited. If a telephone conversation with Applicants’ attorney would help expedite the prosecution of the above-identified application, the Examiner is urged to call Applicants’ attorney at (617) 227-7400.

Respectfully submitted,



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APPENDIX A
“VERSION WITH MARKINGS TO SHOW CHANGES MADE”

11. (Amended) A composition suitable for administering to a subject comprising a compound isolated from cranberry and selected from the group consisting of a phenolic acid, flavanoid, fiber, omega-3-fatty acid, tocochromanol, triterpenoid, ellagic acid, and combinations thereof.

APPENDIX B

Pending Claims

9. A dietary supplement comprising, a composition selected from the group consisting of an essence oil isolated from a citrus fruit, a peel oil isolated from a citrus fruit, a peel isolated from a citrus fruit, decharacterized cranberry fruit, and combinations thereof.
11. A composition suitable for administering to a subject comprising a compound isolated from cranberry and selected from the group consisting of a phenolic acid, flavanoid, fiber, omega-3-fatty acid, tocochromanol, triterpenoid, ellagic acid, and combinations thereof.
12. A composition comprising a compound isolated from cranberry and selected from the group consisting of an anthocyanin, a phenolic acid, a proanthocyanidin, and combinations thereof.
13. A composition isolated from a cranberry having an anthocyanin content which is 30% or greater of that present in the native fruit, a phenolic acid content of 8% or greater of that present in the native fruit, and a proanthocyanidin content of 60% or greater of that present in the native fruit.
14. The composition of claim 11, wherein said phenolic acid is selected from the group consisting of para-coumaric acid, caffeic acid, chlorogenic acid, ferulic acid, protocatechuic acid, cinnamic acid, benzoic acid, gallic acid, para-hydroxybenzoic acid, and combinations thereof.
15. The composition of claim 11, wherein said flavanoid is selected from the group consisting of a proanthocyanidin, flavan-3-ol, anthocyanin, flavanol, and combinations thereof.
16. The composition of claim 15, wherein said proanthocyanidin is selected from the group consisting of a flavan-3-ol polymer, procyanidin B 1, procyanidin B 2, procyanidin B 3, epicatechin oligomer, and combinations thereof.

17. The composition of claim 15, wherein said flavan-3-ol is selected from the group consisting of catechin, catechin gallate, epicatechin, epicatechin gallate, epigallocatechin gallate, gallocatechin gallate, and combinations thereof.
18. The composition of claim 15, wherein said anthocyanin is selected from the group consisting of cyanidin-3-arabinoside, cyanidin-3-galactoside, cyanidin-3-glucoside, peonidin-3-arabinoside, peonidin-3-galactoside, peonidin-3-glucoside, malvidin-3-arabinoside, malvidin-3-glucoside, and combinations thereof.
19. The composition of claim 15, wherein said flavanol is selected from the group consisting of quercetin, q-3-arabinoside (avicularin), q-3-galactoside (hyperin), q-3-glucoside (isoquercitrin), q-3-rhamnoside (quercitrin), myricetin, m-3-arabinoside, m-3-rhamnoside (myricitrin), m-3-digalactoside, kaempferol, isorhamnetin, and combinations thereof.
20. The composition of claim 11, wherein said triterpenoid is ursolic acid.
21. A foodstuff comprising a composition according to claim 11.
22. A dietary supplement comprising a composition according to claim 11.
23. A pharmaceutical comprising a composition according to claim 11.
21. A foodstuff comprising a composition according to claim 11.
22. A dietary supplement comprising a composition according to claim 11.
23. A pharmaceutical comprising a composition according to claim 11.